

WHAT IS CLAIMED IS:

1. A polishing method in the manufacture of semiconductor devices, said method comprising steps of:

rotating a substrate;

rotating a polishing pad;

pressing the rotating substrate against the rotating polishing pad and providing slurry on the polishing pad to polish the substrate; and

while the substrate is being polished, forming at least one free-flowing vertical stream of washing liquid that impinges the polishing pad to remove polishing-pollutants from the polishing pad.

2. The polishing method as claimed in claim 1, and further comprising the step of allowing the at least one free-flowing vertical stream of washing liquid to impinge the polishing pad for 1 to 5 seconds after the substrate has been polished to eliminate slurry and polishing pollutants still remaining on the polishing pad.

3. The polishing method as claimed in claim 1, wherein the washing liquid is deionized water.

4. The polishing method as claimed in claim 1, wherein the forming of the at least one free-flowing vertical stream of washing liquid comprises forming a plurality of free-flowing vertical streams of washing liquid that are spaced apart from one another by equal intervals.

5. The polishing method as claimed in claim 1, wherein the at least one free-flowing vertical stream is formed beginning at a height of about 20 to 40 mm above the surface of the polishing pad.

6. Apparatus for polishing a substrate, comprising:

a polishing station;

a polishing pad mounted to said polishing station; and

a washing device disposed at one side of said polishing pad, said washing device having a plate defining at least one feed hole extending therethrough; and

a source of washing solution connected to said washing device so as to supply washing solution to a location atop said plate, whereby the washing solution drains through said at least one feed hole to form at least one free-flowing vertical stream that impinges the upper surface of said polishing pad to thereby eliminate

polishing-pollutants from the polishing pad.

7. The polishing apparatus as claimed in claim 6, and further comprising a carrier head having a vacuum chuck for grasping a substrate, said carrier head being disposed above said polishing station and being vertically movable so that a substrate grasped by the carrier head can be lowered into contact with the polishing pad.

8. The polishing apparatus as claimed in claim 7, and further comprising a first rotary member connected to the carrier head for making the carrier head rotate.

9. The polishing as claimed in claim 6, and further comprising a rotary member connected to said polishing pad for making the polishing pad rotate

10. The polishing apparatus as claimed in claim 6, and further comprising a slurry dispenser that dispenses slurry onto the polishing pad.

11. The polishing apparatus as claimed in claim 10, wherein said slurry

dispenser has an outlet located at a distal end of said washing device closest to the center of said polishing pad.

12. The polishing apparatus as claimed in claim 10, wherein said slurry dispenser includes a slurry outlet disposed at an outer peripheral portion of said polishing pad.

13. The polishing apparatus as claimed in claim 6, wherein said plate of the washing device has more than six of said feed holes extending therethrough, said feed holes being spaced at equal intervals from one another.

14. The polishing apparatus as claimed in claim 6, wherein each said at least one feed hole has a diameter of about 1.5 to 2.5 mm.

15. The polishing apparatus as claimed in claim 6, wherein said at least one feed hole is located at a height of about 20 to 40 mm above the upper surface of said polishing pad.

16. The polishing apparatus as claimed in claim 6, wherein said washing

device is fixed to said polishing station by a screw.

17. The polishing apparatus as claimed in claim 6, wherein said washing device has a washing liquid outlet, connected to said source of washing solution, disposed at a distal end thereof closest to the center of said polishing pad.

18. The apparatus of polishing a substrate as claimed in claim 6, wherein said washing solution is deionized water.